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**UNITED STATES DISTRICT COURT
EASTERN DISTRICT OF WASHINGTON**

CITY OF SPOKANE, a municipal
corporation located in the County of
Spokane, State of Washington,

Plaintiff,
v.

MONSANTO COMPANY, SOLUTIA
INC., and PHARMACIA
CORPORATION, and DOES 1 through
100.
Defendants.

Case No.: 2:15-cv-00201-SMJ

**PLAINTIFF'S OPPOSITION TO
DEFENDANTS' *DAUBERT* MOTION TO
EXCLUDE THE EXPERT TESTIMONY
OF LISA RODENBURG**

Hearing: March 12, 2020
Oral Argument Requested

1 Notwithstanding the hyperbole in Defendants' *Daubert* motion, there is nothing
2 wrong with the methodology employed, or the data used, by Dr. Lisa Rodenburg in
3 formulating her expert testimony. Defendants are either mistaken about the facts or flat
4 wrong about the bases for her opinions. And tellingly, Defendants have not challenged Dr.
5 Rodenburg's qualifications.¹ Defendants have thrown 10 pages of mud against the wall,
6 but none sticks. For the following reasons, Defendants' *Daubert* motion to exclude the
7 expert testimony of Dr. Lisa Rodenburg should be denied.
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10 **I. Argument.**
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12 To begin, Dr. Rodenburg never stated that byproduct PCBs were the main problem
13 facing the Spokane River, as Defendants maintain, which is contrary to the conclusions she
14 reaches in this case. *See* ECF No. 402 at 2 & ECF No. 403-1 at 4-5. Rather, Dr. Rodenburg
15 stated that byproduct PCBs were the main problem facing the Spokane County Regional
16 Water Reclamation Facility ("SCRWRF"). *See* ECF No. 403-1 at 88-89. Spokane County
17 is not a plaintiff in this lawsuit, and the loads and characteristics of PCBs to the Spokane
18 River from the SCRWRF are markedly different from those of the Spokane's Riverside
19 River from the SCRWRF are markedly different from those of the Spokane's Riverside
20 River from the SCRWRF are markedly different from those of the Spokane's Riverside
21 River from the SCRWRF are markedly different from those of the Spokane's Riverside
22 River from the SCRWRF are markedly different from those of the Spokane's Riverside

23 ¹ Aside from her achievements as a Professor of Environmental Science at Rutgers, Dr.
24 Rodenburg is an international expert on the identification of inadvertent PCBs. *See* ECF
25 No. 403-1 Ex. A at 1-2, 45-46 (citing her peer-reviewed publications).
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1 Park Water Reclamation Facility (“RPWRF”). *See* Exhibit 6 to Land Declaration in
2 Support of Plaintiff’s Response to Defendants’ Daubert Motions (“Land Decl.”) at Dep. at
3 72-73, 117-18. Indeed, in her expert report, Dr. Rodenburg noted that commercial PCBs
4 – i.e., not inadvertent -- account for more than 90% of PCBs in the treated effluent of the
5 Spokane Waste Water Treatment Plant. *See* ECF No. 403-1 at 4-5.
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8 **A. The Data Underlying Dr. Rodenburg’s Opinions Is Reliable.**

9 Defendants complain that “much” of the sampling data reviewed by Dr. Rodenburg
10 was selected by Plaintiff’s counsel. *See* ECF No. 402 at 3. While it is true that Plaintiff’s
11 counsel provided some data—which primarily came from the State of Washington’s online
12 database—to Dr. Rodenburg for her review, most of the data relied upon by Dr. Rodenburg
13 was provided by the Spokane River Regional Toxics Task Force, including all of the
14 surface water data, most of the Kaiser groundwater data, and more than half of all data used
15 for her Multiple Linear Regression analysis. *See* Land Decl. Ex. 6 at 91:8-17, 95:13-20,
16 96:14-17; 96:22-97:4; ECF No. 403-1 at 27-37 (Source Data Column). She did not base
17 her testimony or opinions on representations made by Plaintiff’s counsel, as Defendants
18 suggest.
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23 Defendants next contend that “Rodenburg does not know whether the data are
24 representative of the Spokane River.” ECF No. 402 at 3. This is incorrect. During her
25 deposition, Dr. Rodenburg explained that the samples she analyzed were collected to be
26 representative of the Spokane River in its entirety. Land Decl. Ex. 6 at 103:17-18. She also
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1 looked at the Spokane River at both low flow and high flow and noted that the samples
2 were “pretty representative of the highest flow you’re going to get in the Spokane River.”
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4 *Id.* at 105:2-12. Thus, she was able to determine that the surface water data was
5 representative of the entire range of typical flow conditions in the Spokane River. In
6 addition, her expert report contains Exhibit 1, which is a bar chart of PCB sources at nine
7 sites in the river ranging from river mile 57 to 112. ECF No. 403-1 at 19. Consequently,
8 she was aware that the surface water data was representative of the River spatially and in
9 terms of river flow. And regardless, Dr. Rodenburg’s report simply contends that, in the
10 samples collected by the Spokane Regional Toxics Task Force, commercial PCBs make
11 up about 90% of the total PCBs present – whether this is representative of the River would
12 be a proper issue for cross examination, not a sufficient basis for exclusion.
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16 Defendants claim that Dr. Rodenburg’s data is unreliable because she “did not make
17 any effort to confirm that the data she reviewed has been subjected to appropriate QA/QC
18 and blank correction.” *See* ECF No. 402 at 4. Defendants are again mistaken. As she
19 noted in her expert report and in her deposition, she did an extensive review of blank
20 correction procedures for the surface water data and other studies that she relied upon. *See*
21 Land Decl., Ex. 6 at 182:25-184:5; ECF No. 403-1 at 6, 18. She also performed blank
22 correction on the Kaiser groundwater data, because she determined that it had not been
23 blank corrected. Land Decl., Ex. 6 at 186:14-17.
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1 Defendants next state that Dr. Rodenburg “relied on data that were ‘flagged’ by the
2 sampling laboratories as unreliable.” ECF No. 402 at 7. Defendants criticize Dr.
3 Rodenburg for considering data that had been flagged “N” by laboratories. *Id.* at 4-5. But
4 data that is flagged “N” by laboratories does not mean non-detect as Defendants claim.
5 Instead, “N” flags denote data that does not meet certain criteria and is therefore flagged
6 as EMPC (estimation maximum possible concentration). *See* ECF No. 403-1 at 192
7 (272:5-12); ECF No. 403-1 at 200. EMPC is not equivalent to non-detect, and may be
8 treated as a detection. *See* Land Decl., Exhibit 7 at 34 (“In a case where a peak is present
9 but did not meet all identification criteria, the analyte should be considered as detected and
10 the result should be reported as EMPC.”).

11 And while it is true that Dr. Rodenburg originally failed to correctly input raw data
12 on a couple of occasions, she corrected these errors in her errata report, and the original
13 inaccuracies affected just 0.37% of the data in question. *See* ECF No. 403-1 at 197-200.
14 In any event, the error had no effect on Dr. Rodenburg’s expert opinions and conclusions.
15 *Id.* Defendants also chastise Dr. Rodenburg “for reporting the presence of Aroclor PCBs
16 in at least 31 samples for which her analyses returned negative coefficients.” ECF No. 402
17 at 5. But again, Defendants fail to mention that this error was corrected in Dr. Rodenburg’s
18 errata report, and this error had no effect on the conclusions she reached in her original
19 report. *See* ECF No. 403-1 at 197-200.

20 **B. Dr. Rodenburg’s Methodology Is Reliable and Widely Accepted.**

1 Defendants contend that Dr. Rodenburg “rigged” her Positive Matrix Factorization
2 (“PMF”) and Multiple Linear Regression (“MLR”) analyses by using “various data
3 manipulations.” ECF No. 402 at 8-9. Defendants’ contentions have no merit. First,
4 Defendants claim that Dr. Rodenburg failed to “numerically determine the extent to which
5 sampling data resembled byproduct PCBs, despite admitting that she could have done so.”
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7 See ECF No. 402 at 6. It is correct that Dr. Rodenburg did not compare samples to
8 byproduct PCB patterns. Instead, Dr. Rodenburg compared sampling data to Aroclor PCB
9 patterns or “fingerprints.” In so doing, Dr. Rodenburg was following the methodology
10 used by the authors of multiple peer-reviewed papers.²
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13 Defendants complain that when a factor did not numerically match an Aroclor, Dr.
14 Rodenburg “visually” compared the factor “to determine whether the sample more closely
15 resembled an Aroclor or byproduct fingerprint,” which led to the undercounting of
16 byproduct PCBs, because she was not familiar with the thousands of byproduct
17 fingerprints. ECF No. 402 at 6. But if the factor does not visually resemble an Aroclor
18 fingerprint, then it cannot be characterized as an Aroclor and must be a byproduct
19 fingerprint. She need not be familiar with the fingerprints of all byproduct PCBs in order
20 to characterize a fingerprint. There was no undercounting of byproduct PCBs.
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26 ² See Land Declaration, Exhibits 10-12.
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1 Next, Defendants complain that Dr. Rodenburg employed R2 values “of her own
2 creation” that have never been subject to peer-review and are contradicted by literature that
3 she cites favorably in her report. ECF No. 402 at 7-9. Defendants are just wrong. To
4 begin, the creation of a study standard does not equate to a flawed methodology. Second,
5 the values used in Dr. Rodenburg’s analysis were previously used in the Green-Duwamish
6 River study that was funded by the State of Washington and overseen by the US EPA. *See*
7 Land Decl., Ex. 9. And, she followed the same methodology in her recent peer-reviewed
8 publication, “Source Apportionment of Polychlorinated Biphenyls in Atmospheric
9 Deposition in the Seattle, WA, USA Area Measured with Method 1668.” *See* Land Decl.
10 at Exhibit 8. Third, the statement that “a published study that Rodenburg cites favorably
11 used different R2 values, requiring a value of 0.9 or greater to determine whether a sample
12 contained PCBs and rejecting an R2 value of 0.725 as insufficient” is incorrect. ECF No.
13 402 at 10. In that paper, the authors used a program called “COMSTAR” to analyze
14 capillary column PCB data using “an outlier detection and elimination algorithm.” Land
15 Decl., Exhibit 13 at 1187. This method checks whether the peaks in a measured PCB
16 chromatogram match those in a chromatogram of an Aroclor standard. *Id.* When peaks
17 did not match the Aroclor chromatogram, they were flagged as outliers and discarded from
18 the comparison. *Id.* If enough outliers are excluded, the R2 value should near the perfect
19 value of 1.00. *See id.* Thus, this approach is not designed to determine whether Aroclors
20 are present, but rather to quantify the concentrations of Aroclors that are present. *See id.*

1 Thus, the R2 values cited in that paper bear no relationship to the R2 values used in Dr.
2 Rosenberg's analysis.

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4 Defendants also contend that Dr. Rodenburg failed to "consistently interpret R2
5 values" because she attempted to translate R2 to a percentage-weight of Aroclor PCBs."
6 See ECF No. 402 at 8-9. Dr. Rodenburg consistently used the R2 values as indicators of
7 similarity to Aroclors. The fact that she also used the R2 values to estimate the fraction of
8 PCBs that might be due to non-Aroclor or inadvertent sources does not contradict the other
9 usage of the R2 values. Just because there are two ways to interpret the R2 value does not
10 make one or both of them invalid.

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13 Defendants also criticize Dr. Rodenburg's analysis because she failed to consider
14 "significant alternative sources" of PCBs including foreign-manufactured PCBs,
15 atmospheric deposition of PCBs produced in Asia, and the City's waste-to-energy
16 incineration plant. See ECF No. 402 at 9. This is not true. First, Dr. Rodenburg's expert
17 report specifically analyzed "atmospheric deposition" samples, which should have
18 included any PCBs produced by the incineration plant. See, e.g., ECF No. 403-1 at 32-33.
19 Second, Dr. Rodenburg's analysis looks at whether fingerprints resemble Monsanto's
20 Aroclors, Land Decl. Ex 6 at 81:3-7, so whether Rodenburg considered atmospheric
21 deposition of PCBs from Asia is not relevant. Moreover, courts "do not require experts to
22 eliminate all other possible causes of a condition for the expert's testimony to be reliable."
23 See *Wendell v. GlaxoSmithKline, LLC*, 858 F.3d 1227, 1237-38 (9th Cir. 2017).
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1 Finally, Defendants argue that Dr. Rodenburg erroneously assumed that Aroclors
2 are the “main source” of PCBs in the effluent of the Inland Empire Paper facility. ECF
3 No. 402 at 9. Defendants point out that her assumption that recycling of NCR paper is the
4 source of Aroclor PCBs in Inland Empire’s effluent is undermined by the fact that (1) NCR
5 paper has not been made since 1971, and (2) paper can only be recycled between 5 and 7
6 times. ECF No. 402 at 10. Defendants contend that PCBs in Inland Empire’s effluent are
7 byproduct PCBs from pigments on paper it recycles. ECF No. 402 at 10.

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10 Dr. Rodenburg disagrees with Defendants. Importantly, she notes that the PCB
11 fingerprints in Inland Empire’s effluent match the profile of Aroclor 1242 with R2 values
12 as high as 0.94 when PCB 11 is excluded. *See* ECF No. 403-1 at 29-30. Moreover, NCR
13 paper manufactured before 1971 may have been stored in offices for decades before being
14 recycled. The facts that NCR paper hasn’t been produced since 1971 and arguably cannot
15 be recycled more than 5 to 7 times does not undermine Dr. Rodenburg’s conclusions. Her
16 opinions are based solely on the chemical analysis of PCBs discharged from Inland Empire
17 Paper. Based on this analysis, Dr. Rodenburg believes the PCBs resemble commercial,
18 rather than inadvertent, PCBs regardless of whether they came from NCR paper or another
19 of the myriad uses for which Monsanto sold PCBs.

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22 Defendants’ position that their explanation for PCBs in the effluent of Inland Empire
23 is more reasonable than Dr. Rodenburg’s opinion is an argument that goes to the weight of
24 the evidence, not the admissibility of her opinions and testimony.
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1 **II. Conclusion.**

2 For these reasons, the Court should deny Defendant's Daubert Motion to Exclude
3 the Expert Testimony of Lisa Rodenburg.
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6 RESPECTFULLY SUBMITTED this 14th day of February 2020.

7 By: s/ Brett Land

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CERTIFICATE OF SERVICE

I hereby certify that on February 14, 2020, I electronically filed the foregoing with the Clerk of the Court using the CM/ECF System which in turn automatically generated a Notice of Electronic Filing (NEF) to all parties in the case who are registered users of the CM/ECF system. The NEF for the foregoing specifically identifies recipients of electronic notice.

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